

CLAIMS:

1 1. A method for enabling multiple entities to send and receive messages of a
2 designated class of management services on a particular host, via a switched fabric, comprising
3 the steps of:

4 determining an incoming message for a designated class of management services
5 received from a switched fabric;

6 if the incoming message is an unsolicited incoming message, delivering the unsolicited
7 incoming message to all entities that registered as "promiscuous" clients for the designated class
8 of management services;

9 determining if all "promiscuous" clients indicate that the unsolicited incoming message
10 has not been processed; and

11 if all "promiscuous" clients indicate that the unsolicited incoming message has not been
12 processed, delivering the unsolicited incoming message to an entity that registered as a "non-
13 promiscuous" client for the designated class of management services until a "non-promiscuous"
14 client indicates that the unsolicited incoming message has been processed.

1 2. The method as claimed in claim 1, wherein the "promiscuous" clients are entities
2 registered for receiving all incoming messages that correspond to the designated class of
3 management services, and the "non-promiscuous" client is an entity registered for receiving only
4 messages that are specifically targeted for said entity.

1 3. The method as claimed in claim 2, wherein the designated class of management
2 services indicates a Management Datagram (MAD) class assigned to a specific management
3 service in accordance with the *"InfiniBand™ Architecture Specification"*.

1 4. The method as claimed in claim 3, wherein the specific management service
2 indicates one of a subnet administration service which provides data path information to reach
3 fabric-attached devices; a communication management service which provides the means to set
4 up and manage communications between queue pairs; a performance management service which
5 specifies a set of facilities for examining various performance characteristics of the switched
6 fabric; a device management service which specifies the means for determining the type and
7 location of various types of fabric-attached devices; a device configuration service which assigns
8 fabric-attached devices to the particular host; a baseboard management service which allows
9 management of the fabric-attached devices; and a network protocol service which specifies
10 mechanisms to support transport of Simple Network Management Protocol "SNMP" operations
11 through the switched fabric.

1 5. The method as claimed in claim 3, wherein, when the incoming message is
2 determined as a response message to previously sent messages from the particular host, a
3 ClientID is extracted from a message header and the response message is delivered to an entity
4 identified by the *ClientID*, if the entity is registered for the designated class of management

1 services.

1 6. The method as claimed in claim 5, wherein the incoming message is determined
2 as an unsolicited incoming message when the incoming message does not contain a "response"
3 bit set in a message header, or a response message when the incoming message contains a
4 "response" bit set in the message header.

1 7. The method as claimed in claim 3, wherein all entities are required to register for
2 the designated class of management services to obtain respective valid *ClientID* prior to enabling
3 multiple entities to send and receive messages of the designated class of management services on
4 the particular host.

1 8. A host system comprising:
2 at least one channel adapter (CA) including one or more ports to support data transfers,
3 via a switched fabric; and
4 an access driver module including a general service agent (GSA) to enable multiple
5 entities to send and receive messages of a designated class of management services on the host
6 system, via the switched fabric.

1 9. The host system as claimed in claim 8, wherein the general service agent (GSA)
2 is configured to perform:

1 determining an incoming message for a designated class of management services
2 received from the switched fabric;

3 if the incoming message is an unsolicited incoming message, delivering the unsolicited
4 incoming message to all entities that registered at the general service agent (GSA) as
5 "promiscuous" clients for the designated class of management services;

6 determining if all "promiscuous" clients indicate that the unsolicited incoming message
7 has not been processed; and

8 if all "promiscuous" clients indicate that the unsolicited incoming message has not been
9 processed, delivering the unsolicited incoming message to an entity that registered at the general
10 service agent (GSA) as a "non-promiscuous" client for the designated class of management
11 services until a "non-promiscuous" client indicates that the unsolicited incoming message has
12 been processed.

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1 management service in accordance with the *"InfiniBand™ Architecture Specification"*.

1 12. The host system as claimed in claim 11, wherein the specific management service
2 indicates one of a subnet administration service which provides data path information to reach
3 fabric-attached devices; a communication management service which provides the means to set
4 up and manage communications between queue pairs; a performance management service which
5 specifies a set of facilities for examining various performance characteristics of the switched
6 fabric; a device management service which specifies the means for determining the type and
7 location of various types of fabric-attached devices; a device configuration service which assigns
8 fabric-attached devices to the host system; a baseboard management service which allows
9 management of the fabric-attached devices; and a network protocol service which specifies
10 mechanisms to support transport of Simple Network Management Protocol "SNMP" operations
11 through the switched fabric.

1 13. The host system as claimed in claim 11, wherein, when the incoming message is
2 determined as a response message to previously sent messages from the host system, the general
3 service agent (GSA) extracts a ClientID from a message header and delivers the response
4 message to an entity identified by the *ClientID*, if the entity is registered at the general service
5 agent (GSA) for the designated class of management services.

1 14. The host system as claimed in claim 13, wherein the general service agent (GSA)

1 determines the incoming message as an unsolicited incoming message when the incoming
2 message does not contain a "response" bit set in a message header, or a response message when
3 the incoming message contains a "response" bit set in the message header.

1 15. The host system as claimed in claim 4, wherein all entities are required to register
2 with the general service agent (GSA) for the designated class of management services to obtain
3 respective valid *ClientID* prior to enabling multiple entities to send and receive messages of the
4 designated class of management services on the host system.

1 16. A computer readable medium comprising instructions that, when executed by a
2 host system in a switched fabric including end nodes and switches interconnected via links,
3 cause the host system to allow multiple entities to send and receive messages of a designated
4 class of management services on the host system by performing the steps of:

5 determining an incoming message for a designated class of management services
6 received from the switched fabric;

7 if the incoming message is an unsolicited incoming message, delivering the unsolicited
8 incoming message to all entities that registered as "promiscuous" clients for the designated class
9 of management services;

10 determining if all "promiscuous" clients indicate that the unsolicited incoming message
11 has not been processed; and

12 if all "promiscuous" clients indicate that the unsolicited incoming message has not been

1 processed, delivering the unsolicited incoming message to an entity that registered as a "non-
2 promiscuous" client for the designated class of management services until a "non-promiscuous"
3 client indicates that the unsolicited incoming message has been processed.

1 17. The computer readable medium as claimed in claim 16, wherein the
2 "promiscuous" clients are entities registered for receiving all incoming messages that correspond
3 to the designated class of management services, and the "non-promiscuous" client is an entity
4 registered for receiving only messages that are specifically targeted for said entity.

1 18. The computer readable medium as claimed in claim 17, wherein the designated
2 class of management services indicates a Management Datagram (MAD) class assigned to a
3 specific management service in accordance with the *"InfiniBandTM Architecture Specification"*.

1 19. The computer readable medium as claimed in claim 17, wherein, when the
2 incoming message is determined as a response message to previously sent messages from the
3 host system, a ClientID is extracted from a message header and the response message is
4 delivered to an entity identified by the *ClientID*, if the entity is registered for the designated class
5 of management services.

1 20. The computer readable medium as claimed in claim 19, wherein the incoming
2 message is determined as an unsolicited incoming message when the incoming message does not

1 contain a "response" bit set in a message header, or a response message when the incoming
2 message contains a "response" bit set in the message header.

1 21. The computer readable medium as claimed in claim 17, wherein all entities are
2 required to register for the designated class of management services to obtain respective valid
3 *ClientID* prior to enabling multiple entities to send and receive messages of the designated class
4 of management service on the host system.